

## DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### AIR QUALITY CONTROL MINOR PERMIT

**Permit AQ0271MSS01**

Preliminary – July 29, 2009

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0271MSS01 to the Permittee listed below.

**Operator and Permittee:** **BP Exploration (Alaska) Inc. (BPXA)**  
900 E. Benson Blvd.  
Anchorage, AK 99519-6612

**Owner:** Same as Permittee

**Stationary Source** Prudhoe Bay Seawater Treatment Plant

**Location:** Northing 7812400; Easting 442820

**Physical Address:** Section 11, Township 12N, Range 14E Umiat Meridian, AK

**Permit Contact:** Jim Pfeiffer (907) 564-4549

**Project:** Modify Equipment and add Owner Requested Limit

This permit establishes an Owner Requested Limit (ORL) under 18 AAC 50.508(5) to limit the oxides of nitrogen (NO<sub>x</sub>) emissions from the Lummus heaters. The purpose of the ORL is to avoid project classification under 18 AAC 50.306. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 6 except as specified in this permit.

The Permittee may operate under the terms and conditions of this minor permit upon issuance.

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John F. Kuterbach  
Manager, Air Permits Program

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## Section 1 Emission Unit Inventory

1. **Emission Units.** This permit regards the existing emission units listed below in Table 1.

Table 1 –Minor Permit Emission Unit Inventory

No.	Tag No.	Emission Unit Description	Rating/size <sup>1</sup>
Group II- Gas Fired Heaters			
3	NGH-11-14401	Lummus Hot Water Heater	156 MMBtu/hr <sup>2</sup> (heat input, LHV)
4	NGH-11-14402	Lummus Hot Water Heater	156 MMBtu/hr (heat input, LHV)
5	NGH-11-14403	Lummus Hot Water Heater	156 MMBtu/hr (heat input, LHV)
6	NGH-11-14404	Lummus Hot Water Heater	156 MMBtu/hr (heat input, LHV)
Group III - Dual-Fuel Fired Heaters			
7	NGH-11-14405	Lummus Hot Water Heater	156 MMBtu/hr (heat input, LHV)
8	NGH-11-14406	Lummus Hot Water Heater	156 MMBtu/hr (heat input, LHV)

<sup>1</sup> The Lummus heaters have both heat input and heat output rating. Table 1 uses the heat input rating, which is consistent with Operating Permit AQ0271TVP01. BPXA uses the heat output (heat absorbed) rating in their application. The nominal heat output is currently 120 MMBtu/hr.

<sup>2</sup> BPXA intends to de-rate the existing Lummus heaters from 120 MMBtu/hr heat output to 100 MMBtu/hr heat output.

## ***Section 2. Emission Fees***

2. **Fee Requirements.** Condition 1.1 of Operating Permit AQ0271TVP01 dated July 22, 2003 is revoked and replaced with the following:

1.1 the stationary source's assessable potential to emit of 589.2 tpy.

### ***Section 3. Owner Requested Limit to Avoid PSD Permitting under 18 AAC 50.306***

3. The Permittee shall avoid classification under 18 AAC 50.306 by limiting the combined NO<sub>x</sub> emissions from Emission Units 3 through 8 to no greater than 151 tons per 12 consecutive months. Monitor, record, and report as indicated in Condition 4 through 12.
4. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the NO<sub>x</sub> limit in Condition 3.
5. The Permittee shall install and operate a NO<sub>x</sub> and an excess air continuous emission monitor system (CEMS) on Emission Units 3 through 8 and in accordance with Section 4.
  - 5.1. Operate CEMS and record data during all periods of operation except for CEMS breakdown and repairs. Data is recorded during calibration checks, and zero and span adjustments.
6. The Permittee shall install, calibrate, maintain and operate fuel gas meters for measuring fuel gas usage at 2% accuracy.
7. The Permittee shall calculate the daily average NO<sub>x</sub> mass emission rate in lbs/hr for each of Emission Units 3 through 8 using the calculated average emission index (lb/MMBtu) recorded from the CEMS and the input firing rate (MMBtu/hr, HHV) determined from the measured fuel usage in Condition 6.
8. The Permittee shall calculate the monthly and the consecutive 12-month summation of NO<sub>x</sub> emissions for Emission Units 3 through 8, every 15<sup>th</sup> of the month.
9. The Permittee shall include with the operating report described in Condition 59 of Operating Permit AQ0271TVP01:
  - 9.1. results of source tests conducted under Condition 11, and
  - 9.2. a summary of the monthly and the consecutive 12 month summation of NO<sub>x</sub> emissions for Emission Units 3 through 8.
10. The Permittee shall report to the Department all emissions or operations that exceed or deviate from the limits in Condition 3.

## **Section 4. General Source Testing and Monitoring Requirements**

### **Continuous Emissions System**

11. **Source Testing:** Install, calibrate, maintain and operate the CEMs required in Condition 5 according to Performance Specification 2 of 40 C.F.R. 60, Appendix B; and 40 C.F.R. 60 Subpart Db. Certify test results; operate; and maintain air contaminant emissions and process monitoring equipment on the emission units. Conduct quality assurance procedures for gas continuous emission monitoring systems used for compliance determination listed in 40 C.F.R. 60, Appendix F. Comply with monitoring requirements listed in 40 C.F.R. 60.13. Submit monitoring equipment sitting, operation, and maintenance plans for approval by the Department within 60 days prior to the operation of modified six Lummus heaters. Within 60 days after completing relative accuracy test audit (RATA), cylinder gas audit (CGA) or relative accuracy analysis (RAA), submit report of the test results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030(8).
12. **Monitoring Requirement.** For continuous emission monitoring systems, comply with 40 C.F.R 60 Subpart Db, 40 C.F.R. 60.48b and periodic *Quality Assurance Procedures in Appendix F*; and the *EPA Quality Assurance Handbook for Air Pollution Measurements*, EPA/600 R-94/038b, effective July 1, 1997, during periods of heater operation. NO<sub>x</sub> emission rates measured by the continuous emissions monitoring systems (CEMS) shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates in Condition 7 and determine compliance with applicable NO<sub>x</sub> emission limits on a continuous basis.

## **Section 5. General Certification and Information Request Requirements**

13. **Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
- 13.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
- a) a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
  - b) the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 13.1a) , that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.
12. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

## ***Section 6. Terms to Make Permit Enforceable***

13. The Permittee must comply with each permit term and condition. Non-compliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
  - 13.1. an enforcement action; or
  - 13.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
14. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
15. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
16. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
17. The permit does not convey any property rights of any sort, nor any exclusive privilege.

## **Section 7      *Permit Documentation***

July 23, 2009	Revisions to BPXA's original STP application from Sims Duggins (AECOM) to reflect PTE of 61 tpy for all six Lummus heaters and to show that the project avoids PSD permitting only, not minor permitting under 18 AAC 50.502(c)(3).
July 17, 2009	Revisions to Attachment II of BPXA's STP application from Sims Duggins (AECOM) after teleconference between Jeff Alger, Alan Schuler and Jimmy Yap, regarding PTE of inoperable heaters which have zero emissions in the application.
May 26, 2009	Email response from Jeff Alger of AECOM in behalf of BPXA with proposed PEMS language.
May 12, 2009	Email to Jeff Alger of AECOM in behalf of BPXA regarding PEMS.
May 8, 2009	Email from Jeff Alger of AECOM to Jimmy Yap clarifying BPXA's request in the application that either CEMS or PEMS are options for each heater, not both.
October 31, 2008	Email from Jim Pfeiffer of BPXA to Michael Everson/ADEC regarding completed/clarified items pertaining to BPXA's October 9, 2008 minor permit application
October 14, 2008	Email response from Michael Everson/ADEC to BPXA regarding minor permit application dated October 9, 2009 requesting for some corrections in the application
October 9, 2008	Minor Permit Application for the STP Lummus Heaters and cover letter from Jim Pfeiffer of BPXA
May 20, 2008	Email response from Alan Schuler/ADEC to Sims Duggins/ENSR, confirming that BPXA's STP Lummus heater modification project does not need a modeling analysis
May 16, 2008	Email from Sims Duggins/ENSR to Alan Schuler/ADEC, enumerating the reasons why BPXA's STP Lummus heater modification project does not require ambient air quality modeling.
May 2, 2008	Modeling protocol submitted by ENSR for BPXA
February 2008	Attachment 11-A for BPXA's STP renewal application Title V Operating Permit AQ0271TVP02 referred in the footnote of the minor permit application's emission unit inventory as STP's current PTE.

## Section 8. ATTACHMENT

### Attachment 1 – ADEC Notification Form<sup>3</sup>

Stationary Source Name

Air Quality Permit Number

Company Name

#### When did you discover the Excess Emissions/Permit Deviation?

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ : \_\_\_\_

#### When did the event/deviation occur?

Begin Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ : \_\_\_\_ (please use 24hr clock)

End Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ : \_\_\_\_ (please use 24hr clock)

What was the duration of the event/deviation? \_\_\_\_ : \_\_\_\_ (hrs: min) or \_\_\_\_ Days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

**Reason for Notification:** (please check only 1 box and go to the corresponding section)

☐ Excess Emissions - Complete Section 1 and Certify.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

#### Section 1. Excess Emissions

a. Was the exceedance: ☐ Intermittent or ☐ Continuous

b. Cause of Event (Check one that applies):

☐ Start Up /Shut Down

☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure

☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas

☐ Upset Condition

☐ Other

c. Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

d. Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

<sup>3</sup> Revised as of August 24, 2006.

Unit ID	Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

e. Type of Incident (Please Check only one).

- ☐ Opacity \_\_\_\_\_ %      ☐ Venting \_\_\_\_\_ (gas/scf)      ☐ Control Equipment Down  
☐ Fugitive Emissions      ☐ Emission Limit Exceeded      ☐ Flaring  
☐ Marine Vessel Opacity      ☐ Other: \_\_\_\_\_

f. Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?    ☐ Yes      ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235?    ☐ Yes      ☐ No

Certify Report (go to end of form)

## Section 2 Permit Deviations

(a) Permit Deviation Type (check only one box, corresponding with the section in the permit).

- ☐ Emission Unit Specific  
☐ Failure to monitor/report  
☐ General Source Test/Monitoring Requirements  
☐ Recordkeeping/Reporting/Compliance Certification  
☐ Standard Conditions Not Included in Permit  
☐ Generally Applicable Requirements  
☐ Reporting/Monitoring for Diesel Engines  
☐ Insignificant Emission Unit  
☐ Record Keeping Failure  
☐ Stationary Source Wide  
☐ Other Section \_\_\_\_\_ (title of section and section number of your permit).

(b) Emission Unit Involved.

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

Unit ID	Unit Name	Permit Condition / Potential Deviation

(c) Description of Potential Deviation:

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

**Certification:**

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

**To Submit this Report:**

Fax to: 907-451-2187;

Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov) - if emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 34;

Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;

Phone Notification: 907-451-5173 - phone notifications require a written follow-up report within the deadline listed in Condition 33; OR

Online Submission: - if submitted online, the report must be certified within the Operating Report required for the same reporting period per Condition 34.